

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An exhaust gas control apparatus for an internal combustion engine, comprising:

a NOx storage reduction catalyst which is provided in an exhaust passage for an internal combustion engine;

a concentration ~~detection means~~ detector whose detection state can be changed between a first detection state in which a total concentration of sulfur oxide and hydrogen sulfide in exhaust gas that has passed through the NOx storage reduction catalyst is detected, and a second detection state in which a concentration of the sulfur oxide in the exhaust gas is detected; and

a controller which performs a poisoning recovery process that controls an operating state of the internal combustion engine such that the sulfur oxide is released from the NOx storage reduction catalyst, wherein

the detection state of the concentration ~~detection means~~ detector is alternately changed between the first detection state and the second detection state after the concentration ~~detection means~~ detector which is in the second detection state detects release of the sulfur oxide from the NOx storage reduction catalyst during the poisoning recovery process performed by the controller, whereby the concentration ~~detection means~~ detector obtains the concentration of the sulfur oxide and a concentration of the hydrogen sulfide.

2. (Currently Amended) The apparatus according to claim 1, wherein the detection state of the concentration ~~detection means~~ detector is changed between the first detection state and the second detection state at given time intervals.

3. (Currently Amended) The apparatus according to claim 1, wherein the detection state of the concentration ~~detection means~~ detector is changed to the first detection state when it is determined that a range of variation of the concentration of the sulfur oxide that is detected by the concentration ~~detection means~~ detector is equal to or less than a predetermined value.

4. (Currently Amended) The apparatus according to claim 1, wherein the concentration ~~detection means~~ detector includes an oxidation catalyst that has oxidation catalytic activity for the hydrogen sulfide; the concentration ~~detection means~~ detector which is in the first detection state detects the total concentration of the sulfur oxide and the hydrogen sulfide in exhaust gas that has passed through the oxidation catalyst; and a delay period from when the detection state of the concentration ~~detection means~~ detector is changed to the first detection state until when the total concentration is detected is set to be longer than a delay period from when the detection state of the concentration ~~detection means~~ detector is changed to the second detection state until when the concentration of the sulfur oxide is detected.

5. (Currently Amended) The apparatus according to claim 1, wherein the controller changes the detection state of the concentration ~~detection means~~ detector to the first detection state or the second detection state according to a state of the NO_x storage reduction catalyst during the poisoning recovery process performed by the controller.

6. (Currently Amended) The apparatus according to ~~any one of claims 1 to 5~~ claim 1, wherein when the controller determines that the concentration of the hydrogen sulfide that is obtained by the concentration ~~detection means~~ detector during the poisoning recovery process exceeds a permissible limit, the controller causes the concentration ~~detection means~~ detector to remain in the first detection state, the controller controls the operating state of the internal combustion engine such that the sulfur oxide is released from the NOx storage reduction catalyst, an amount of the released sulfur oxide is in a predetermined range, and the concentration of the hydrogen sulfide is reduced, and the controller changes the detection state of the concentration ~~detection means~~ detector to the second detection state after the total concentration starts to decrease.

7. (Original) The apparatus according to claim 6, wherein the controller controls the operating state of the internal combustion engine such that the concentration of the hydrogen sulfide is reduced, by performing at least one of a process of increasing an exhaust gas air-fuel ratio in a rich air-fuel ratio range, and a process of decreasing a temperature of the NOx storage reduction catalyst in a temperature range in which the sulfur oxide is released.

8. (Currently Amended) The apparatus according to ~~any one of claims 1 to 7~~ claim 1, wherein when the controller determines that the concentration of the hydrogen sulfide is lower than a permissible limit, the controller controls the operating state of the internal combustion engine such that the amount of the sulfur oxide released from the NOx storage reduction catalyst is increased.

9. (Original) The apparatus according to claim 8, wherein the controller controls the operating state of the internal combustion engine such that the amount of the released sulfur oxide is increased, by performing at least one of a process of decreasing an exhaust gas air-fuel ratio, and a process of increasing a temperature of the NOx storage reduction catalyst.

10. (Currently Amended) An exhaust gas control method for an internal combustion engine, comprising the steps of:

performing a poisoning recovery process that controls an operating state of an internal combustion engine such that sulfur oxide is released from a NOx storage; reduction catalyst provided in an exhaust passage for the internal combustion engine;

detecting a concentration of the sulfur oxide in an exhaust gas that has passed through the NOx storage reduction catalyst by a concentration ~~detection means~~ detector which is in a second detection state during the poisoning recovery process;

changing a detection state of the concentration ~~detection means~~ detector between a first detection state in which a total concentration of sulfur oxide and hydrogen sulfide in the exhaust gas and the second detection state after the concentration of the sulfur oxide is detected by the concentration ~~detection means~~ detector which is in the second detection state, and obtaining the concentration of sulfur oxid